IN THE CLAIMS

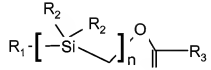
Please replace all prior versions and claims listing with the following claims listing.

Claims Listing

1. (currently amended) A method of forming a cross-linked coating on a medical device, comprising the steps of:

(a) immersing the medical device in a first solution comprising an organic solvent and a multifunctional crosslinking agent selected from the group consisting of a *bis*-variant of polyethylene glycol or polyethylene oxide, and

(b) immersing the medical device in a second solution wherein the second solution comprises an organic solvent and a cross-linkable biomolecule selected from the group consisting of chondroitin sulfate, heparan sulfate, or heparin and rendered surface adsorbable by conjugation with ~~1-30 hydrophobic benzylated~~ a silyl moiety ~~groups~~ of formula I



formula I

through R_3 wherein R_1 is an C_{1-8} alkyl or C_{6-32} aryl group, each R_2 is independently selected from the group consisting of C_{1-8} alkyl and C_{6-32} aryl, R_2 is N or O, and n is a number from 1 to 30.

2. (original) The method of claim 1, wherein prior to immersing the medical device in the first solution or second solution as provided in steps (a) and (b), the medical device is immersed in a wetting solution.

3. (original) The method of claim 1 wherein the first solution does not comprise water and the second solution comprises from about 10 to 80 percent water by volume.

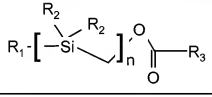
4-7 (cancel)

8. (currently amended) A method of forming a thromboresistant coating on a porous surface of a medical device, comprising the ordered steps of:

(a) providing a medical device with a porous surface;

(b) immersing the medical device in a first solution comprising an organic solvent and a multifunctional crosslinking agent selected from the group consisting of a *bis*-variant of polyethylene glycol or polyethylene oxide; and

(c) immersing the medical device in a second solution wherein the second solution contains a cross-linkable biomolecule selected from the group consisting of chondroitin sulfate, heparan sulfate, or heparin rendered surface adsorbable by conjugation with ~~1-30 hydrophobic benzylated~~ a silyl moiety ~~groups~~ of formula I



formula I

through R_3 wherein R_1 is an C_{1-8} alkyl or C_{6-32} aryl group, each R_2 is independently selected from the group consisting of C_{1-8} alkyl and C_{6-32} aryl, R_3 is N or O, and n is a number from 1 to 30.

9. (original) The method of claim 8, wherein the medical device comprises expanded polytetrafluoroethylene.

10. (previously presented) The method of claim 1, wherein the wetting solution is an organic solvent.

11. (previously presented) The method of claim 10, wherein the organic solvent is acetone, isopropanol, acetonitrile, methanol, ethanol or any combination thereof.

12. (cancel)

13. (previously presented) The method of claim 8, wherein the *bis*-variant of polyethylene glycol or polyethylene oxide is bis-(benzotriazole carbonate) polyethylene glycol.

14. (previously presented) The method of claim 13, wherein the *bis*-variant of polyethylene glycol or polyethylene oxide is at a concentration between about 0.001 mg/mL and 500 mg/mL.

15. (previously presented) The method of claim 13, wherein the *bis*-variant of polyethylene glycol or polyethylene oxide is at a concentration between about 0.2 mg/mL and 10 mg/mL.

16. (previously presented) The method of claim 8, wherein the first organic solvent is acetonitrile or acetone, and wherein the first solution does not comprise water.

17. (original) The method of claim 8, wherein the first solution does not comprise water and the second solution comprises from about 10 to 80 percent water by volume.

18. (cancel)

19. (cancel)

20. (cancel)

21. (currently amended) The method of claim ~~20~~ 8, wherein the ~~conjugate of from 1 to 30 hydrophobic~~ silyl ~~moieties~~ moiety and the ~~heparin activity biomolecule~~ cross-linkable biomolecule is at a concentration in the second solution of from about 0.01% to about 10%.

22. (currently amended) The method of claim ~~20~~ 8, wherein the ~~conjugate of from 1 to 30 hydrophobic~~ silyl ~~moieties~~ moiety and the ~~heparin activity biomolecule~~ cross-linkable biomolecule is at a concentration in the second solution of from about .25% to about 1.5%.

23. (currently amended) The method of claim ~~20~~ 8, wherein the ~~conjugate of from 1 to 30 hydrophobic~~ silyl ~~moieties~~ moiety and the ~~heparin activity biomolecule~~ cross-linkable biomolecule is benzyl-*bis*(dimethylsilylmethyl)$_x$-oxycarbamoyl-heparin.

24. (cancel)

25. (currently amended) The method of claim ~~24~~ 8, wherein the second solution further comprises from about 10 to 80 percent water by volume.

26. (original) The method of claim 8, wherein immersing in each step is for between about 5 minutes and two hours.

27. (previously presented) The method of claim 26, wherein immersing the medical device in the first solution is in each step for between about 15 minutes and about one hour.

28. (previously presented) The method of claim 26, wherein immersing the medical device in the second solution is for between about 45 minutes and about 75 minutes.

29. (withdrawn) A thromboresistant expanded polytetrafluoroethylene vascular graft comprising:

a tubular expanded polytetrafluoroethylene construct with an interior lumen; and

a cross-linked co-polymer coating on the surface of the interior lumen, the cross-linked co-polymer coating consisting essentially of a conjugate of at least one prosthetic hydrophobic unit and a heparin activity biomolecule cross-linked with a *bis*-variant of polyethylene glycol, polyethylene oxide, or polyethylene glycol.

30. (withdrawn) The graft of claim 29, wherein the conjugate of at least one prosthetic hydrophobic unit and a heparin activity biomolecule is from 1 to 30 hydrophobic silyl moieties conjugated to the heparin activity biomolecule.

31. (withdrawn) The graft of claim 29, wherein the *bis*-variant of polyethylene glycol, polyethylene oxide, or polyethylene glycol is bis-(benzotriazole carbonate) polyethylene glycol.

32. (withdrawn) A medical device with a thromboresistant blood-contacting surface, comprising:

a medical device with at least one porous blood-contacting surface; and

a cross-linked co-polymer coating on the porous surface, the cross-linked co-polymer coating consisting essentially of a conjugate of at least one prosthetic hydrophobic unit and a heparin activity biomolecule cross-linked with a *bis*-variant of polyethylene glycol, polyethylene oxide, or polyethylene glycol.

33. (withdrawn) The medical device of claim 32, wherein the at least one porous blood-contacting surface comprises expanded polytetrafluoroethylene.

34. (withdrawn) The medical device of claim 32, wherein the at least one porous blood-contacting surface comprises a woven polymeric surface.

35. (withdrawn) The medical device of claim 32, wherein the conjugate of at least one prosthetic hydrophobic unit and a heparin activity biomolecule is from 1 to 30 hydrophobic silyl moieties conjugated to the heparin activity biomolecule.

36. (withdrawn) The graft of claim 32, wherein the *bis*-variant of polyethylene glycol, polyethylene oxide, or polyethylene glycol is bis-(benzotriazole carbonate) polyethylene glycol.

37. (withdrawn) A thromboresistant coating for a medical device, comprising an in situ cross-linked co-polymer consisting essentially of a conjugate of at least one prosthetic hydrophobic unit and a heparin activity biomolecule cross-linked with a *bis*-variant of polyethylene glycol, polyethylene oxide, or polyethylene glycol.

38. (withdrawn) The coating of claim 37, wherein the conjugate of at least one prosthetic hydrophobic unit and a heparin activity biomolecule is from 1 to 30 hydrophobic silyl moieties conjugated to the heparin activity biomolecule.

39. (withdrawn) The coating of claim 37, wherein the *bis*-variant of polyethylene glycol, polyethylene oxide, or polyethylene glycol is bis-(benzotriazole carbonate) polyethylene glycol.

40. (previously presented) The method of claim 8 further comprising immersing the porous surface in the second solution after immersing the porous surface in the crosslinking solution.

41. (previously presented) The method of claim 8 further comprising wetting the porous surface by immersion in a wetting solution prior to contacting the porous surface with the second solution.